

THIS IS PARKER

Electric Actuated Shut-Off/Flow Regulating Needle Valve

The need to remotely control process flow at high pressure used to require both pneumatic and electric systems combined, which is cumbersome and expensive to operate.

Parker Autoclave Engineers has developed an All-Electric Regulating/Full Closure needle valve for pressures up to 60,000 psi in a variety of valve styles.

Available in Weather-Proof or Explosion-Proof versions, these actuators allow for remote control and feedback to digital control systems with just a 4-20mA signal.

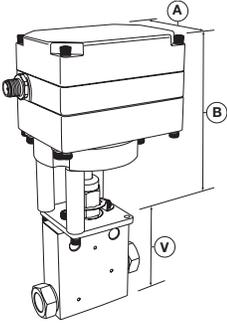
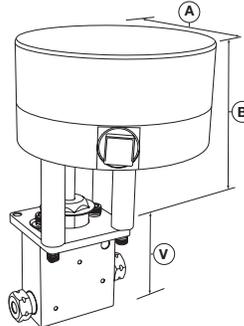


Explosion-Proof Version



ENGINEERING YOUR SUCCESS.

Dimensions:

Weather-Proof Version	Explosion-Proof Version	Version	A	B	V
		Weather-Proof FRC1	3.0" (76.2 mm)	3.67" (93.2 mm)	See Valve Brochure for Dimension
		Weather-Proof FRC2 High Torque	3.0" (76.2 mm)	5.57" (141.4 mm)	
		Explosion-Proof FRC1X	4.25" (107.9 mm)	4.35" (110.4 mm)	
		Explosion-Proof FRC2X High Torque	4.25" (107.9 mm)	5.86" (148.8 mm)	

Electrical Specifications:

- Electrical Input: 24VDC only, 72 Watt maximum
- Control Input: 4-20mA
- Position Feedback: Independent 4-20mA
- Position Detection: Hall Sensors
- Motor: BLDC brushless DC motor

Position on Powerloss:

- Remembers Last Position
- Reseats Valve if Signal is Between 3.0 and 4.16mA

Ordering Guide: (reference individual Valve Series brochure for exact valve detail)

Example Part Number:	20SM	9	8	8	2	-	TG	FRC2X
Ordering Parameters/Options:	Valve Series	Tube/Pipe Size (OD)	Seat	Stem Type	Body Pattern		Valve Options	Electric Flow Regulating Actuator
Table Reference: (see below)	A	B	C	D	E		F	G

20SM9882-TGFRC2X = 20SM Series Needle Valve, 20,000 psi MAWP, 9/16" MP Cone and Thread, 2-way Angle/Replaceable Seat Valve, PTFE Glass packing to 600°F max, Flow Regulating On/Off Explosion Proof Actuator/High Torque

A - Valve Series
10V2, SW, 15P, 15SM, 20SM , 30VM, 60VM

B - Tube/Pipe Size (limited to sizes shown below)	
2	1/8" (10V2 only)
4	1/4"
6	3/8"
8	1/2" (SW and P Only)
9	9/16" (SM and VM Valves Only)

C - Seat: STD/Replaceable Type	
0	STD
8	Replaceable (Body Pattern 2 Only)

D - Stem Type	
8	Regulating

E - Body Pattern (see individual valve brochure for details)	
1	Straight
2	Angle
3	3-Way, 2 On-Pressure
4	3-Way, 1 On-Pressure

Mechanical Specifications:

- Standard Enclosure - EPD Coated NEMA 4/IP65 Equivalent
- Optional Anodized Aluminum Explosion-Proof Enclosure, Nema 8/IP67, CSA Approved for Class 1, Groups B, C, D /T6 Areas
- 500+ Positions per turn (+/- 0.25° Position Accuracy), 3243 Actuator Positions over Full Span
- Speed Range: 3 to 15 seconds/turn
- Operational Temperature -40°(-40°C) to 160°F(70°C), Valve Temperature not to exceed 600°F
- Life Expectancy: 250,000 cycles
- Gears and Bearings are Lifetime Lubricated
- 20 ft. cable included with 6 pin/5 wire connector (FRC1 and FRC2 only)

F - Valve Options: (600°F Maximum Valve Temperature)	
TG	PTFE Glass Packing to 600°F
B	Cryogenic 0 to -100°F
CSS	Coated Stem and Seat
K	Anti-Vibration Glands
SOG	NACE Approved Materials
See Technical Brochure for valve material options. Other options available.	

G - Electric Flow Regulating Actuator	
FRC1	Indoor/Weather-Proof w/20ft cable
FRC2	Indoor/Weather-Proof w/20ft cable (High Torque: SW8, 15P8, 15SM9, 20SM9 Valves)
FRC1X	Explosion-Proof - Class 1, Groups B, C, and D
FRC2X	Explosion-Proof - Class 1, Groups B, C, and D (High Torque: SW8, 15P8, 15SM9, 20SM9 Valves)
FRC1Xc	Explosion-Proof with Div 2 Explosion Proof Cable Option, 20ft
FRC2Xc	Explosion-Proof with Div 2 Explosion Proof Cable Option, 20ft (High Torque: SW8, 15P8, 15SM9, 20SM9 Valves)